BEFORE THE
FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, DC 20554

In the Matter of	)	
	)	
Review of the Commission's Rules Governing the 896-901/935-940 MHz Band	)	WT Docket No. 17-200
	)	
	)	
	)	

To: The Commission

COMMENTS OF SOUTHERN COMPANY SERVICES, INC.

Southern Company Services, Inc., on behalf of its electric utility operating company and communications service provider affiliates (collectively, "Southern"), hereby submits its comments in response to the Commission's *Notice of Proposed Rulemaking* in the above-captioned proceeding requesting comment on the proposed reconfiguration of the 900 MHz band (896-901/935-940 MHz) to facilitate the development of broadband technologies and services.[1]

Southern supports the Commission's efforts in this proceeding to expand the availability of broadband spectrum for utility and critical infrastructure industry ("CII") communications needs. In particular, Southern supports the creation of a 3/3 MHz broadband segment, which would provide utilities and other CII and enterprise entities with access to much-needed broadband spectrum. At the same time, however, Southern urges the Commission to also consider steps to facilitate 5/5 MHz broadband operations in the 900 MHz band in areas where

[1] / *Review of the Commission's Rules Governing the 896-901/935-940 MHz Band*, WT Docket No. 17-200, Notice of Proposed Rulemaking, FCC 19-18 (rel. March 14, 2019) ("*NPRM*").

(1) there are no issues of incumbency or incumbent opposition, and (2) such operations are not opposed by incumbents in adjacent areas. Southern agrees that a market-driven voluntary exchange process would best facilitate the realignment of the 900 MHz band, although additional measures may be necessary in order to ensure an efficient and complete transition process.

Southern supports the Commission's proposed 15-year term for broadband licenses in the 900 MHz band, but suggests that a longer term of up to 20 years may be appropriate given the characteristics and nature of this band and of the incumbent operations. However, Southern opposes the adoption of performance requirements based on population coverage and urges the Commission to adopt alternative metrics that more appropriately accommodate the needs of utilities, CII, and other private wireless users. The Commission should recognize that the use of this spectrum to support vital public services provides significant benefits to a much greater percentage of the population than is actually "covered" by a licensee's signal, and should therefore adopt performance requirements based on the actual service and benefit to the public that the use of the spectrum is providing rather than on arbitrary coverage percentages.

For similar reasons, Southern agrees with the Commission's suggestion to apply a more general flexible use standard to the performance requirements for the 900 MHz broadband segment and urges the Commission to provide licensees the flexibility to deploy other narrowband services such as narrowband-Internet of Things ("NB-IoT"), which will continue to be part of the utility/CII technology portfolio for ensuring the safe, reliable, and efficient delivery of critical public services.

I. INTRODUCTION

Southern Company Services, Inc. is a wholly owned subsidiary service company of Southern Company, a holding company based in Atlanta, Georgia, which operates regulated electric and natural gas utilities serving 9 million customers in nine states. Southern Company

owns three electric utility subsidiaries – Alabama Power Company ("Alabama Power"), Georgia Power Company ("Georgia Power"), and Mississippi Power Company ("Mississippi Power") – which provide retail and wholesale electric service throughout a 100,000+ square mile service area in Georgia, the southern two-thirds of Alabama, and southeastern Mississippi. Southern Company supplies wholesale electric power to municipalities, rural electric cooperatives, and other distribution providers through its Southern Power subsidiary, which operates natural gas, solar, wind, and biomass generating facilities in nine states. Southern Company Gas provides natural gas distribution and storage in nine states: Illinois, Georgia, Tennessee, Virginia, California, Texas, Louisiana, Alabama, and Florida.

Southern Communications Services, Inc. d/b/a Southern Linc ("Southern Linc"), a wholly owned subsidiary of Southern Company, operates a commercial digital 800 MHz ESMR system that uses an all-LTE platform to provide interconnected voice, dispatch, push-to-talk, text and picture messaging, internet access, and data transmission services over the same handset. Southern Linc provides these services over a 127,000 square mile service territory covering Georgia, Alabama, southeastern Mississippi, and the Panhandle of Florida. Southern Linc offers comprehensive geographic coverage, serving the extensive rural territory within its footprint as well as major metropolitan areas and highway corridors. Because of its expansive regional coverage and history of reliability, Southern Linc's service is widely used by state and local public safety agencies, school districts, rural local governments, public utilities, and other emergency responders. It is also utilized by other commercial entities in both urban and rural areas.

As a subsidiary of Southern Company, Southern Linc also supports the internal communications needs of its affiliated electric utility operating companies. These include not

only mobile services but also fixed point-to-point and fixed point-to-multipoint wireless services for a variety of applications that support the safe, reliable, and efficient delivery of essential electric utility services, such as monitoring, load management, and supervisory control and data acquisition ("SCADA") systems.

II. REALIGNMENT OF THE 900 MHz BAND AND TRANSITIONING TO THE NEW BAND PLAN

Southern supports the Commission's proposal to realign the 900 MHz band to create a new broadband segment and urges the Commission to maximize the availability of this band for broadband service while maintaining sufficient spectrum for existing 900 MHz narrowband operations. Southern also supports the use of a market-driven voluntary exchange process to facilitate the realignment of the 900 MHz band, although additional measures may be necessary in order to ensure an efficient and complete transition process.

A. Band Realignment to Create Broadband Licenses

The Commission proposes to reconfigure the 900 MHz band to create a paired three MHz (3/3 MHz) broadband segment, with the remaining 2 MHz of the band available for 900 MHz narrowband operations.[2] Southern supports the creation of a 3/3 MHz broadband segment, which would provide utilities and other CII and enterprise entities with access to much-needed broadband spectrum. At the same time, however, Southern urges the Commission to also consider steps to facilitate 5/5 MHz broadband operations in the 900 MHz band in areas where (1) there are no issues of incumbency or incumbent opposition, and (2) such operations are not opposed by incumbents in adjacent areas.

---

[2] / *NPRM* at ¶ 11.

Southern has experienced first-hand the ways in which broadband can provide effective and valuable support to utility operations, and therefore supports the Commission's efforts in this proceeding to expand the availability of broadband spectrum for utility and CII communications needs. Dedicated broadband service provides utilities and CII the high data capacity and low latency necessary for the deployment of technologies and applications that support the increasing reliability, security, and efficiency needs of the nation's energy infrastructure. In many cases, commercial broadband service providers generally cannot meet the levels of coverage, capacity, reliability, and security required by utilities and CII and are unable to provide the dedicated capacity needed for data-intensive, low latency CII applications and uses.

A licensed broadband allocation in the 900 MHz band has the potential to support a number of higher-bandwidth deployments and applications, including many "next generation" electric grid applications. Examples of utility and CII use cases for broadband include: video surveillance of substations and other critical assets; mission-critical push-to-talk; Advanced Metering Infrastructure ("AMI") backhaul; distribution line devices; network underground devices; transmission and distribution substation supervisory control and data acquisition ("SCADA"); online dissolved gas analysis; condition based maintenance monitoring; transmission line switches; commercial and industrial metering; environmental monitoring; gas measurement data collection; hydro-monitoring for generation; load curtailment notification; transmission tower light monitoring; network lighting controls; voltage monitoring and adjustment; mobile computing; and mobile hotspots (*e.g.*, for storm recovery teams).

Although a nationwide 3/3 MHz broadband segment will greatly facilitate the development and deployment of broadband technologies by utilities and other CII entities, it will not be sufficient to fully support the increasing capacity and performance demands of mission

critical communications. As the Commission recognizes in the *NPRM*, a 3/3 MHz broadband link "would have relatively limited capacity and speed" in comparison to existing 4G operations in other frequency bands.[3] Southern therefore urges the Commission to not only create a nationwide 3/3 MHz broadband segment in the 900 MHz band, but to also consider steps to facilitate 5/5 MHz broadband operations in the 900 MHz band in areas of the country where this can be achieved without disruption to existing narrowband operations.[4] In particular, Southern recommends that the Commission consider realigning the entire 900 MHz band to create a 5/5 MHz broadband channel in areas where (1) there are either no narrowband incumbents or there is no opposition by incumbents to realignment of the full band into a 5/5 MHz broadband channel, and (2) the full realignment of the band in that area is not opposed by incumbents in the adjacent areas. This approach would further the Commission's statutory goal of improving the efficiency of spectrum use by making an additional 2/2 MHz of spectrum that would otherwise be unused or underused available for the development and deployment of broadband technologies and services.

B. Transition to the New Band Alignment

Southern supports the Commission's proposal to initially rely on a market-driven voluntary exchange process to facilitate the realignment of the 900 MHz band.[5] A significant number of 900 MHz narrowband incumbents are utilities and other CII entities who rely on their existing systems to support the safety, reliability, and efficiency of their operations. In addition, the number of such incumbents and the intensity of existing use of the 900 MHz band varies

---

[3] / *Id.* at ¶ 12.

[4] / *See* i*d.* at ¶ 20.

[5] / *Id.* at ¶¶ 26 – 27.

widely across geographic areas around the country.[6] Southern agrees with the Commission that a market-driven, voluntary approach based on private agreements can bring speed and efficiency to the realignment process while maintaining access to sufficient spectrum for continued narrowband operations.[7] However, a purely voluntary approach to relocation and realignment also brings with it a high risk of holdouts, which could disrupt the speed, efficiency, and completeness of the realignment process.[8] Southern therefore recommends a finite period for the voluntary exchange process that provides a reasonable amount of time for negotiations and the conclusion of an agreement, after which some form of mandatory relocation may be appropriate in order to mitigate against the holdout problem and ensure an efficient and complete transition process.

In addition, in order to maintain a stable spectrum landscape during the realignment process, Southern recommends that the Commission maintain its current freeze on the acceptance of applications for new or expanded 900 MHz operations, except as needed to relocate 900 MHz incumbents.[9] Southern agrees, however, with the Utilities Technology Council ("UTC") and the Enterprise Wireless Alliance ("EWA") that this freeze should be modified to apply only to applications by entities who are not affiliated with current incumbent licensees in the 900 MHz band.[10]

---

6 / *See, e.g.*, *id*. at ¶ 24.

7 / *Id.* at ¶ 26.

8 / *See id.* at ¶¶ 37 – 38.

9 / *See Wireless Telecommunications Bureau Announces Temporary Filing Freeze on the Acceptance of Certain Part 90 Applications for 896-901/935-940 MHz (900 MHz Band) Spectrum*, Public Notice, WT Docket No. 17-200, DA 18-949 (rel. Sept. 13, 2018).

10 / *See* Petition for Reconsideration or Clarification of the Utilities Technology Council, WT Docket No. 17-200 (filed Oct. 15, 2018); Reply of the Enterprise Wireless Alliance to Petition for Clarification and/or Reconsideration, WT Docket No. 17-200 (filed Oct. 25, 2018).

III. LICENSING AND OPERATING RULES

Southern supports the adoption of a longer license term for the 900 MHz broadband license. However, Southern opposes the adoption of performance requirements based on population coverage and urges the Commission to adopt alternative metrics that more appropriately accommodate the needs of utilities, CII, and other private wireless users.

A. The Commission Should Adopt a Longer License Term for the 900 MHz Broadband License

The Commission proposes to adopt a 15-year term for broadband licenses in the 900 MHz band in recognition of the fact that a licensee in this band would face relocation and band clearance issues that will necessarily delay the start of initial deployment of new services.[11] Southern agrees that a longer license term is warranted in light of the potential complexity of – as well as the time and expense required for – completing the relocation and realignment process in the 900 MHz band. Southern therefore supports the Commission's proposed 15-year license term, but suggests that a longer term of up to 20 years may be appropriate for a 900 MHz broadband license given the characteristics and nature of this band and of the incumbent operations.

B. The Commission Should Adopt Performance Requirements Appropriate to the Anticipated Use of the 900 MHz Broadband Segment

Southern opposes the Commission's proposal to adopt performance requirements for the 900 MHz broadband license that are based on population coverage[12] and urges the Commission to consider an alternative metric that more appropriately aligns with the Commission's stated purpose for realigning the 900 MHz band – namely, to "create opportunities for robust

---

[11] / *NPRM* at ¶ 59.

[12] / *Id.* at ¶ 60.

broadband networks that fully support critical communication systems and that ensure the low latency and ultra-high reliability required by electric and other utilities, as well as other B/ILT and SMR spectrum users."[13] A substantial amount of the critical infrastructure that would be supported by 900 MHz broadband operations – such as electric transmission lines and generating plants, oil and gas pipelines and refineries, etc. – is intentionally located away from densely populated areas, yet this infrastructure delivers critical public services to hundreds of millions of consumers. Any performance requirements based on the population covered by the licensee's signal would therefore penalize the licensee for deploying the 900 MHz broadband service around the very infrastructure that the service is intended to support. Furthermore, adopting performance requirements based solely on population coverage would be inconsistent with the Commission's own determination that a 3/3 MHz broadband link "by itself, might not be able to serve direct-to-consumer demand in densely populated areas."[14]

In considering an appropriate performance metric for the 900 MHz broadband license, the Commission should recognize that the use of this spectrum to support vital public services provides significant benefits to a much greater percentage of the population than is actually "covered" by a licensee's signal. Southern recommends that the Commission adopt performance requirements based on the actual service and benefit to the public that the use of the spectrum is providing rather than on arbitrary coverage percentages. For example, the Commission's construction requirement for licensees in the 2.5 GHz band requires BRS/EBS licensees to make a showing of substantial service and provides various alternatives for satisfying this "substantial

---

[13] / *Id.* at ¶ 8; The Commission further states "[G]iven the potential use of the 900 MHz broadband segment by private wireless users such as electric utilities or other B/ILT eligibles, we seek comment on what alternative metrics, if any, would be necessary to accommodate such users." *Id*. at ¶ 61.

[14] / *Id.* at ¶ 12.

service" standard, including "[p]roviding specialized or technologically sophisticated service that does not require a high level of coverage to benefit consumers" or "[p]roviding service to niche markets or areas outside the areas served by other licensees."[15] Given the anticipated use of the 900 MHz broadband segment by private wireless users such as electric utilities and other CII entities, the adoption of similar alternative performance standards is necessary to accommodate the needs and operational realities of such users.[16]

For similar reasons, Southern agrees with the Commission's suggestion to apply a more general flexible use standard to the performance requirements for the 900 MHz broadband segment.[17] In particular, the Commission should provide 900 MHz broadband licensees the flexibility to deploy other narrowband services such as narrowband-Internet of Things ("NB-IoT").[18] Together with broadband-enabled applications and use cases, narrowband services such as NB-IoT are and will continue to be part of the utility/CII technology portfolio for ensuring the safe, reliable, and efficient delivery of critical public services. The Commission should therefore provide utility and CII users the flexibility to deploy such services in a way that best meets each user's particular needs.

Finally, Southern urges the Commission to refrain from applying any new renewal requirements, such as additional renewal term construction obligations, that may arise out of the

---

[15] / 47 C.F.R. § 27.14(o); 47 C.F.R. § 27.14(o)(1)(iv) and (v).

[16] / These types of performance standards or showings could be adopted as a "safe harbor" alternative in situations where quantifiable benchmarks, such as coverage percentages, either are not met or are inappropriate.

[17] / *NPRM* at ¶ 63.

[18] / *Id*.

WRS Renewal Reform FNPRM to the 900 MHz broadband segment.[19] Utility and other CII users deploy private wireless systems in order to support their own internal communications and operational needs. The imposition of additional construction obligations as a condition of license renewal would effectively require private wireless users to build and deploy more than they may actually need to support their operations, thus incurring significant expense without any benefit to themselves or to consumers.

IV. CONCLUSION

Overall, the *NPRM* presents a balanced approach to making much-needed broadband spectrum available to support critical communications and provide the low latency and ultra-high reliability required by utilities, CII, and other private wireless users, and Southern urges the Commission to adopt rules on the realignment of the 900 MHz band consistent with the recommendations herein.

Respectfully submitted,

SOUTHERN COMPANY SERVICES, INC.

/s/ Coy Trosclair

Coy Trosclair
Director, Telecom Services
Southern Company Services, Inc.
30 Ivan Allen Jr. Blvd.
Atlanta, GA 30308
T: 404.506.5000

Dated: June 3, 2019

[19] / *Id.* at ¶¶ 68 – 69; *Amendment of Parts 1, 22, 24, 27, 74, 80, 90, 95, and 101 to Establish Uniform License Renewal et al.*, Second Report and Order and Further Notice of Proposed Rulemaking and Order, 32 FCC Rcd 8874, 8912-14 (2017).